Poster Session I

AUTOIMMUNE DISEASE

113

ORGAN FUNCTION AND QUALITY OF LIFE CORRELATES AT RANDOMIZATION ON THE SCOT (SCLERODERMA: CYCLOPHOSPHAMIDE OR TRANSPLANTATION) TRIAL

Sullivan, K.M.[1], Froshaug, D.B.[2], Furst, D.E.[3], Nash, R.A.[4], Mayes, M.D.[5], Crofford, L.J.[6], McSweeney, P.A.[7], Goldmuntz, E.A.[8], Keyes-Elstein, L.[2], Khanna, D.[3] [1]Duke University Medical Center, Durham, NC; [2]Rho Federal System, Chapel Hill, NC; [3]University of California-Los Angeles, Los Angeles, CA; [4]Fred Hutchinson Cancer Research Center, Seattle, WA; [5]University of Texas-Houston, Houston, TX; [6]University of Kentucky, Lexington, KY; [7]Rocky Mountain Cancer Centers, Denver, CO; [8]National Institutes of Health, Bethesda, MD

Objective: Autoimmune diseases offer unique opportunities to measure disease burden and response to immunomodulation with hematopoietic cell transplantation (HCT). To study baseline impairments in health-related quality of life (HR-QOL), we analyzed correlates of HR-QOL indices among patients with diffuse systemic sclerosis (SSc) participating in the SCOT trial.

Methods: Subjects with poor prognosis SSc were enrolled in the ongoing multicenter trial comparing immunosuppression with 12 monthly infusions of CY (750mg/m2) vs. immunoablation followed by CD34-selected autologous HCT. Entry criteria are detailed at the study website (www.sclerodermatrial.org). Validated HR-QOL indices included the short form 36 (SF-36) physical component summary (PCS) and mental component summary (MCS), health assessment questionnaire-disability index (HAQ-DI), and the UCLA gastrointestinal instrument (GIT 2.0). We assessed Pearson correlations between HR-QOL indices and objective disease measures: coefficients > / = 0.32 (representing R^2 > / = 10%) were considered meaningful associations.

Results: 61 subjects were evaluated before treatment: 40 were female; mean age was 46 and disease duration was 3.8 yr; mean (SD) % predicted FVC was 74.6 (16.2) and DLCO was 50.5 (8.2). Mean modified Rodnan Skin Score (mRSS) was 30.9 (9.5). mRSS measures dermal thickening ranging from 0 (none) to 51 (total body sclerosis). Baseline mean PCS was 27.4 which is 2.3 SD below the US general population. The 61 patients had moderate functional disability (mean HAQ-DI 1.4) while the mean total GIT (measured in 21 pts) was 0.76, where 0.4 signifies moderate severity. For comparison, subjects with diffuse SSc enrolled in the Scleroderma Lung Study (comparing CY with placebo, Tashkin NEJM 2006) had a higher (better) baseline PCS (32.1) and lower (better) HAQ-DI (1.02) (Khanna Arthritis Rheum 2005). The table presents Pearson's correlations between HR-QOL indices and mRSS, FVC and DLCO. Correlations (r) with magnitudes of > / = 0.32 are bolded.

Table 1. Baseline Pearson's Correlation Coefficients (r) for HR-QOL Measures versus Dermal and Pulmonary Measures

Variables	mRSS[1]	FVC[2]	DLCO[2]
SHAQ			
HAQ-DI[1]	**0.58***	0.02	**-0.41***
Pain VAS[1]	0.05	0.05	0.00
SF-36			
SF-36 PCS [2]	**-0.47***	0.02	0.25
SF-36 MCS[2]	-0.03	0.08	0.13
SF-36 Physical functioning[2]	**-0.47***	0.10	**0.45***
SF-36 Role limitations[2]	**-0.40***	-0.01	0.31*
SF-36 Pain [2]	-0.20	0.10	0.08
SF-36 General health [2]	-0.15	-0.07	0.07
SF-36 Vitality[2]	-0.12	0.11	0.06
SF-36 Social functioning [2]	-0.17	0.00	0.07
SF-36 Role emotional [2]	-0.15	0.10	0.25
SF-36 Mental health[2]	-0.04	0.01	0.17

(*Continued*)

Table 1. (*Continued*)

Variables	mRSS[1]	FVC[2]	DLCO[2]
UCLA GIT 2.0			
Reflux scale[1]	**-0.34***	**0.32**	0.24
Distention scale[1]	**-0.47***	0.27	**0.41**
Diarrhea[1]	0.09	-0.13	-0.23
Constipation[1]	0.08	-0.11	-0.30
Emotional well-being[1]	-0.13	-0.05	0.07
Social functioning[1]	0.07	**0.33**	-0.23
GIT Total Score	-0.29	0.24	0.17

[1]Lower scores denote better HR-QOL or lower intensity of symptoms.
[2]Higher scores denote better HR-QOL or lower intensity.
*Correlations significant at p<0.05. %R^2 >10% (r>0.32) are bolded.

Conclusions: Patients in the SCOT study had marked baseline impairments in physical health. Objective disease measures of dermal and pulmonary involvement correlated with symptom burden. Longitudinal analysis (12 test repetitions over 72 mo) at study completion will offer unique rigor in HCT trials, provide a rich basis for comparisons with immune and mechanistic studies, and characterize alterations in HR-QOL indices across the two treatments of SSc.

AUTOLOGOUS TRANSPLANTS

114

DOUBLE HIGH DOSE SALVAGE THERAPY WITH DOSE-INTENSIFIED CYCLOPHOSPHAMIDE, ETOPOSIDE, AND CISPLATIN (DICEP) RE-INDUCTION FOLLOWED BY HIGH-DOSE MELPHALAN (HDM) AND AUTOLOGOUS STEM CELL TRANSPLANTATION (ASCT) CONSOLIDATION FOR RELAPSED/REFRACTORY HODGKIN LYMPHOMA

Shafey, M., Duan, Q., Russell, J.A., Duggan, P., Balogh, A., Stewart, D.A. University of Calgary, Tom Baker Cancer Centre, Calgary, AB, Canada

The purpose of this study was to retrospectively review our results of double high-dose therapy with DICEP re-induction followed by HDM and ASCT for this patient population.

Between June 1995 and November 2009, 73 patients with relapsed (43) or refractory (30) classical HL were treated with DICEP (dose-intensified cyclophosphamide 5.25 g/m^2, etoposide 1050 mg/m^2, and cisplatin 105 mg/m^2) with autologous blood stem cell apheresis performed upon hematopoietic recovery, followed 2-3 weeks later by HDM (melphalan 200 mg/m^2) and ASCT.

Patient characteristics included: age 20-63 years (median 37); bulk > 5 cm = 39, bulk > 10 cm = 12; number of prior chemotherapy regimen(s) failed 1 = 63, 2-4 = 10; prior radiotherapy = 30; initial time to progression < 3 months = 30, 3-12 months = 21, and > 12 months = 22; median time from diagnosis to ASCT 15 months (range 4-324); B symptoms = 18; and International Prognostic Score (IPS) 0-1 = 19, 2 = 26, 3 = 17, 4-7 = 11. DICEP chemotherapy resulted in successful stem cell mobilization in 71 patients (97%), with a median $CD34^+$ cell count of 15.6 x10^6/kg (range 4.7-70.9 x10^6/kg). 63 patients (86%) responded to DICEP, including 13 complete responses (18%). 4 patients did not proceed to HDM-ASCT; two failed to mobilize stem cells, one experienced grade IV infection, and one experienced bleeding and respiratory arrest with anoxic brain injury following removal of an internal jugular apheresis catheter following stem cell collection. The latter patient was the only treatment-related death following DICEP. With a median follow-up of 56 months post-DICEP (range 3-170 months), the 5-year PFS and OS rates were 61% [95%CI = 49-72%] and 80% [95%CI = 69-89%], respectively. The 5 year PFS was 65% vs. 30% for DICEP responders vs. non-responders